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3 Rec'd PCT/PTO 19 FEB 2002

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A2: METHOD FOR PRODUCING CYCLIC POLYETHER COMPOUNDS

Technical Field

The invention of the present application relates to a method for producing cyclic polyether compounds. More particularly, the invention of the present application relates to a method for producing cyclic polyethers that may be used as a starting material for the synthesis of natural substances such as gambierol, at room temperature without using excess phosphate compounds.

Background of the Invention

It has been known that marine polycyclic ethers such as ciguatoxin and gambierol act as neurotoxins and exist in fish and shellfish, causing food poisoning and red tide that deadens fish. Particularly, gambierol (compound I) is a toxin isolated from a dinoflagellate, *Gambierdiscus toxicus*, and is known to have a high toxicity of LD₅₀ of 50 µg/kg (mice; i.p.). The complicated steric structure of gambierol has been studied in detail using NMR and chiral anisotropic reagents (*J. Am. Chem. Soc.* 1993, 115, 361-362; *Tetrahedron Lett.* 1998, 39, 97-100).